

Amendments to and listing of the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. Please add new claims 20-21, as follows:

1. (Previously presented) A fiducial marker holder apparatus for image-guided surgery comprising:

an open-ended frame having first and second arms, the open-ended frame being configured to be removably attached to a maxillary holding device and the first arm having at least one marker attachment point that receives fiducial markers; and

a marker attachment device disposed at a distal end of the second arm of the open-ended frame, the marker attachment device having a plurality of marker attachment points that receive fiducial markers, at least two of the marker attachment points of the marker attachment device being configured to receive fiducial markers in different orientations with respect to the marker attachment device and each other.
2. (Previously presented) The fiducial marker holder apparatus according to claim 1, wherein the marker attachment device is movably attached to the second arm of the open-ended frame.
3. (Previously presented) The fiducial marker holder apparatus according to claim 2, wherein the marker attachment device is configured to be fixedly oriented in more than one position.
4. (Previously presented) The fiducial marker holder apparatus according to claim 1, further comprising an additional marker attachment device disposed at a distal end of the first arm of the open-ended frame, the additional marker attachment device having a plurality of marker attachment points that receive fiducial markers.

5. (Previously presented) The fiducial marker holder apparatus according to claim 1, wherein the marker attachment points are each configured as one of a threaded socket, a threaded post, a through-hole, a post, a socket and a detent.
6. (Previously presented) A fiducial marker holder apparatus for image-guided surgery comprising:
a maxillary holding device configured to be temporarily secured to only a maxillary-region of a patient;
an open-ended frame having first and second arms, the open-ended frame being configured to be removably attached to the maxillary holding device, the first arm having at least one marker attachment point that receives fiducial markers and the second arm having a plurality of marker attachment points that receive fiducial markers, at least two of the marker attachment points of the second arm being configured to receive fiducial markers in different orientations with respect to the open-ended frame and each other.
7. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the open-ended frame is rigid.
8. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the open-ended frame is formed of one of a carbon-fiber material, a non-metallic composite, and a polymeric material.
9. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the marker attachment points are each configured as one of a threaded socket, a threaded post, a through-hole, a post, a socket and a detent.

10. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the second arm has a first portion and a second portion extending at an angle from the first portion.
11. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the first arm has a plurality of marker attachment points that receive fiducial markers and the first arm has a first portion and a second portion extending at an angle from the first portion.
12. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the maxillary holding device includes a locking dental acrylic resin splint that is custom molded for a particular patient.
13. (Previously presented) The fiducial marker holder apparatus according to claim 6, wherein the maxillary holding device is fastened directly to the patient by fasteners.
14. (Previously presented) A fiducial marker holder system for image-guided surgery comprising:
a maxillary holding device having a first clamping part, a second clamping part and a fixing tool, the fixing tool being configured to temporarily secure the first and second clamping parts to only a maxillary-region of a patient;
an open-ended frame having first and second arms, the open-ended frame being configured to be removably attached to the maxillary holding device, the first arm having at least one marker attachment point that receives fiducial markers and the second arm having a plurality of marker attachment points that receive fiducial markers, at least two of the marker attachment points of the second arm being configured to receive fiducial markers in different orientations with respect to the open-ended frame and each other; and

a reference emitter configured to be removably attached to the maxillary holding device or the open-ended frame.

15. (Previously presented) The fiducial marker holder system according to claim 14, wherein the open-ended frame is formed of a rigid material.

16. (Previously presented) The fiducial marker holder system according to claim 14, wherein the first arm has a plurality of marker attachment points that receive fiducial markers.

17. (Previously presented) The fiducial marker holder apparatus according to claim 14, wherein the marker attachment points are each configured as one of a threaded socket, a threaded post, a through-hole, a post, a socket and a detent.

18-19. (Cancelled)

20. (New) The fiducial marker holder apparatus according to claim 1, wherein at least three of the marker attachment points of the marker attachment device are configured to receive fiducial markers in different orientations with respect to the marker attachment device and each other.

21. (New) The fiducial marker holder apparatus according to claim 6, wherein the second arm has a first portion and a second portion extending at an angle from the first portion, the first portion having at least one marker attachment point and the second portion having at least two marker attachment points.